

CLAIMS

What is claimed is:

1. A process for reducing generation of particles in a process chamber having a pedestal assembly for supporting a substrate and at least one antenna provided in said pedestal assembly for conducting bias power, comprising the steps of:

removing said at least one antenna from said pedestal assembly; and

processing said substrate in said process chamber.

2. The process of claim 1 further comprising the steps of applying a first magnitude of source power to said process chamber and applying a second magnitude of source power to said process chamber after applying said first magnitude of source power.

3. The process of claim 1 wherein said removing said at least one antenna from said pedestal assembly comprises the step of removing said at least one antenna from at least one antenna opening in said pedestal assembly and further comprising the step of filling said at least one antenna opening.

4. The process of claim 3 further comprising the steps of applying a first magnitude of source power to said process chamber and applying a second magnitude of source power to said process chamber after said first magnitude of source power.

5. The process of claim 3 wherein said pedestal assembly comprises an insulator and a pedestal carried by said insulator for supporting said substrate, and wherein said at least one antenna opening extends through said insulator.

6. The process of claim 5 further comprising the steps of applying a first magnitude of source power to said process chamber and applying a second magnitude of source power to said process chamber after applying said first magnitude of source power.

7. The process of claim 2 wherein said applying a first magnitude of source power to said process chamber comprises increasing said source power from 0 watts to about 100 watts and said applying a second magnitude of source power to said process chamber comprises increasing said source power from about 100 watts to about 340 watts.

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8. The process of claim 7 wherein said removing said at least one antenna from said pedestal assembly comprises the step of removing said at least one antenna from at least one antenna opening in said pedestal assembly and further comprising the step of filling said at least one antenna opening.

9. The process of claim 8 wherein said pedestal assembly comprises an insulator and a pedestal carried by said insulator for supporting said substrate, and wherein said at least one antenna opening extends through said insulator.

10. The process of claim 9 wherein said at least one antenna opening comprises a plurality of antenna openings and said at least one antenna comprises a plurality of antennae.

11. The process of claim 5 wherein said pedestal comprises aluminum.

12. The process of claim 11 further comprising the steps of increasing a source power for said chamber from 0 watts to about 100 watts and then increasing said source power from about 100 watts to about 340 watts.

13. A process for reducing generation of particles in a pre-clean chamber having a pedestal assembly for supporting a substrate and a plurality of antennae provided in said pedestal assembly for conducting bias power, comprising the steps of:

removing said plurality of antennae from said pedestal assembly; and

subjecting said substrate to a pre-clean etch process in said pre-clean chamber.

14. The process of claim 13 further comprising the steps of applying a first magnitude of source power to said process chamber and applying a second magnitude of source power to said process chamber after said first magnitude of source power.

15. The process of claim 13 wherein said pedestal assembly comprises an insulator and a pedestal carried by said insulator for supporting said substrate.

16. The process of claim 15 wherein said removing said plurality of antennae from said pedestal assembly comprises the step of removing said plurality of antennae from a plurality of antenna openings in said insulator and further comprising the step of filling said plurality of antenna openings.

17. The process of claim 16 further comprising the steps of applying a first magnitude of source power to said pre-clean chamber and applying a second magnitude of source power to said pre-clean chamber after said first magnitude of source power.

18. A process for reducing generation of particles in a pre-clean chamber having a pedestal assembly for supporting a substrate and a plurality of antennae provided in said pedestal assembly for conducting bias power, comprising the steps of:

removing said plurality of antennae from said pedestal assembly;

increasing a source power for said chamber to about 100 watts;

increasing said source power from about 100 watts to about 340 watts; and

subjecting said substrate to a pre-clean etch process.

19. The process of claim 18 wherein said removing said plurality of antennae from said pedestal assembly comprises the step of removing said plurality of antennae from a plurality of antenna openings in said pedestal assembly and further comprising the step of filling said plurality of antenna openings.

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20. The process of claim 19 wherein said pedestal assembly comprises an insulator and a pedestal carried by said insulator for supporting said substrate, and wherein said plurality antenna openings extends through said insulator.